

sectors, the extended format sectors comprising a user data sector field for storing user data and a backup indicator field for indicating the status of the user data sector field is taught as controller 108 which uses metadata 116 including the backup list 120, pointer set list 122, accumulator indicator 123, and update map 121 wherein the update map 121 may comprise a bit map, where each bit represents one subpart of the backup dataset, and the status of that bit indicates whether the change accumulator 130 contains any updates affecting that subpart.

The Applicants respectfully traverse this rejection.

Applicants' invention requires data recording media comprising a plurality of extended format sectors. Accordingly, the present invention assumes that the recording media has been formatted with the extended sector format. The extended format sectors include a user data sector field for storing user data and a backup indicator field for indicating the status of the user data sector field. The backup indicator field is used to indicate whether user data in the user data sector field has been written to backup storage subsequent to a previous backup operation. Thus, Applicants' invention provides an effective way of knowing which sectors have been updated by the host in order to perform an incremental backup on subsequent passes without reference to a separate log of metadata kept by the host or the controller.

In contrast, Miller provides a change log containing metadata concerning changes to an original dataset received by the system after creating a backup dataset. According to Miller, if any changes to the primary data are received by the system after creating the backup data, the changes are stored by the system in a change log. Change logs may be consolidated and sorted.

However, Miller does even mention extended formatting as illustrated with reference to Fig. 5 in Applicants' specification. Further, Miller does not suggest providing a physical disk format larger than the host data format. Moreover, Miller fails to suggest providing recording media with extended format sectors that includes a user data sector field for storing user data and a backup indicator field for indicating the status of the user data sector field as recited in Applicants' independent claims 1, 6, 11 and 20.

Therefore, in view of the above remarks, Applicants' independent claims 1, 6, 11 and 20 are patentable over Miller.

Because claims 2-5, 7-10, 12-19 and 21-22 depend from independent claims 1, 6, 11 and 20, respectively, include the features recited in the independent claims as well as additional features, Applicants respectfully submit that claims 2-5, 7-10, 12-19 and 21-22 are also patentably distinct over the cited reference. Nevertheless, Applicants are not conceding the correctness of the Examiner's rejection with respect to such dependent claims and reserves the right to make additional arguments if necessary.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

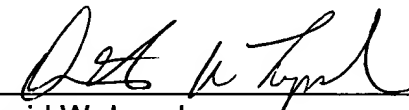
If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, David W. Lynch at 952-253-4104.

Respectfully submitted,

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Date: 12/30/02

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